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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/806,345

03/23/2004

Marcus Johannes Henricus Willems Van Dijk

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06/14/2007

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EXAMINER

KIM, PETER B

ART UNIT

PAPER NUMBER

2851

MAIL DATE

DELIVERY MODE

06/14/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/806,345

Applicant(s)

WILLEMS VAN DIJK ET AL.

Examiner

Peter B. Kim

Art Unit

2851

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 13-30, 32 and 33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 11 and 12 is/are rejected.
- 7) ☒ Claim(s) 7-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 03/2004, 07/2005.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of claims 1-12 and 31 in the reply filed on April 10, 2007 is acknowledged. The traversal is on the ground(s) that an examination of all claims can be made without a serious burden. Applicant argues that because the dependent claims 2 and 3 recite that the object is a substrate or a mask and therefore the invention of Group I is similar to the invention of Group II which is directed to a lithographic apparatus. This is not found persuasive because the lithographic apparatus of Group II is an exposure apparatus comprising a radiation system and a projection system to project a patterned beam onto a substrate. A substrate or a mask which is gripped and transferred in Group II has utilities other than an lithographic exposure apparatus for example pre exposure or post exposure processing. Further, applicant argues that similar search term and technique will be used for the examination of Group I and II. However, because the inventions belong in different class/subclass, it is not clear that similar terms and techniques will be used.

The requirement is still deemed proper and is therefore made FINAL.

Claims 13-30, 32 and 33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on April 10, 2007.

In response to applicant's argument that claim 31 should be a part of Group I, claim 31 is included in Group I. Further, as discussed with applicant's representative Christophe Lair on

May 31, 2007, claims 14-21 do not depend on claim 12, but depend on claim 13, and claims 23-30 do not depend on claim 21, but depend on claim 22.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims are rejected under 35 U.S.C. 102(b) as being anticipated by Kanai et al. (Kanai) (5,790,338).

Regarding claims 1 and 31, Kanai discloses a transfer apparatus and a method of transferring an object comprising a gripping device (3, 5) for releasing the object (4) at a first position (150) after gripping the object at a second position (1) proximate to a receiver (1); a measurement (9, 51) device configured to measure a relative position of the gripper (5) with respect to the receiver (1) in at least two direction (abstract, col. 3, lines 23-32, and 44-62, col. 4, lines 35-45), wherein a relative position error is determined with respect to a desired relative position based on the measured relative position and the relative position of the gripper and the receiver is adjusted based on the reduction of the relative position error in the second position (1) (abstract, col. 4, lines 35-45).

Regarding claims 4, 5 and 6, Kanai discloses the relative position measured by measuring the distance between a first reference point (vertical rib, col. 4, lines 56-67) of the receiver and a second reference point (51) of the gripper, and one sensor (51) provided on the gripper (5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 3, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kanai in view of Hine et al. (Hine) (6,591,160).

Kanai discloses the claimed invention as discussed above; however, Kanai does not disclose the object comprising a substrate or a mask, and Kanai does not disclose determining the position of the object relative to the gripper. Hine discloses a transfer apparatus (Fig. 1) comprising a gripper (52), a sensor (50) for determining position of the object (target -wafer, 46, see abstract) relative to the gripper (col. 9, line 45 – col. 10, line 13). Although Kanai discloses the object comprising a magnetic tape, as shown by Hine a substrate or a mask is also transferred by the similar device from a similar rack or library. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the object comprising a mask or a substrate to be transferred by the invention of the Kanai because a magnetic tape or a mask or a substrate required precise positioning and transportation, and to provide the sensor to determine the relative position of the object and the gripper in order to ensure more precise positioning and accuracy as taught by Hine in col. 3, lines 14-39.

Allowable Subject Matter

Claims 7-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 7, none of the prior art of record teaches or discloses a transfer apparatus comprising the sensor provided on a stable frame and the first reference point on the gripper or the object and a second reference point on the receiver.

Regarding claim 8, none of the prior art of record teaches or discloses a transfer apparatus comprising a mechanical docking structure that docks the gripper to a frame and the measurement device comprises on the frame.

Regarding claims 9 and 10, none of the prior art of record teaches or discloses a transfer apparatus comprising minimizing the difference in relative velocity or acceleration between the gripper and the receiver.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter B. Kim whose telephone number is (571) 272-2120. The examiner can normally be reached on 9:00 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'Peter B. Kim', with a stylized flourish at the end.

Peter B. Kim
Primary Examiner
Art Unit 2851

June 5, 2007